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DIRECTORATE OF  
INTELLIGENCE

# Intelligence Memorandum

*Recent Trends in South African Arms Procurement*

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CENTRAL INTELLIGENCE AGENCY  
Directorate of Intelligence  
October 1972

INTELLIGENCE MEMORANDUM

RECENT TRENDS IN SOUTH AFRICAN ARMS PROCUREMENT

Introduction

1. As an aftermath of the indiscriminate killing of black demonstrators by the South African police, the United Nations imposed in 1963 an arms embargo against South Africa. The United Kingdom, which had been South Africa's major supplier of arms, decided to honor the embargo except for existing commitments. Thus South Africa was faced with the loss of its traditional sources of supplies at a time the government was concerned about domestic racial violence and the possibility of intervention by other African states.

2. Pretoria's reactions were two-pronged: (1) a drive to establish new foreign sources of arms and (2) an expansion of South Africa's capabilities to manufacture war materiel. South Africa's countermeasures to the embargo have proved highly successful. France moved quickly to capture the market vacated by the British, justifying its ignoring of the embargo on the grounds that the French arms being supplied were not suitable for repressing South Africa's blacks. Thus France has provided South Africa about US \$180 million of arms since 1963 (compared with UK deliveries of some \$95 million). In addition, about \$40 million of arms have been obtained from other foreign sources. With these purchases the South African military has developed a balanced inventory of advanced weapons, including jet fighters, helicopters, submarines, and armored vehicles. Furthermore, South Africa's defense industries have been successfully expanded so that today they now provide about 70% of the country's overall defense requirements. This memorandum reports on South Africa's arms procurement over the past decade and details the success that has been achieved in developing its munitions industries.

Note: This memorandum was prepared by the Office of Economic Research and coordinated within CIA.

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3. South Africa, bound culturally and historically to the Western community, found itself increasingly isolated in the early 1960s because of its policy of apartheid. Threatened internally by racial strife that had exploded in major clashes at Sharpsville and Paarl, South Africa considered itself also threatened from without by the African states that had recently won independence. These nations were calling for blockades and invasion of white-dominated South Africa. Protracted insurgencies in the neighboring Portuguese territories and instability in Rhodesia also were viewed as potential threats to South African security. One reaction was Pretoria's collaboration with Lisbon and Salisbury, demonstrating its determination to maintain buffer areas against a hostile black Africa.

4. Pretoria perceives as its major security problem the need to control its large, potentially hostile, non-white population and to prevent its subversion by externally supported forces. Second, Pretoria has long been concerned about the need to control its strategic coastal waters. To effect its security policy after the UN embargo, the South African government developed new sources of arms, accelerated its arms purchases, expanded its own defense industries, and strengthened its armed forces.

Arms Procurement - An Ineffective Embargo

5. South Africa has imported almost \$485 million of military equipment since 1953 (see Table 1). Almost two-thirds of the total was delivered after 1963, although some \$90 million provided by the British during that period was contracted for earlier. When the British stopped selling arms to South Africa in 1964, France cornered the market. French sales of more than \$200 million during the past decade enabled South Africa's military establishment to re-equip by replacing British weaponry of World War II vintage with supersonic jet fighters, jet transports, submarines, and anti-tank and surface-to-air missile systems to achieve a highly mobile, well-armed modern armed force.

The United Kingdom - Off, Then On Again

6. Until the United Kingdom agreed to honor the UN arms embargo, it was South Africa's chief source of arms and training. During 1954-63, South Africa had imported about \$125 million of arms from the United Kingdom, including eight Shackleton reconnaissance aircraft, nine Canberra bombers, 16 Buccaneer strike jets, three antisubmarine warfare destroyer

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Table 1

Deliveries of Military Equipment to South Africa<sup>a)</sup>

Million US \$							
<u>Year</u>	<u>Total</u>	<u>United Kingdom</u>	<u>France</u>	<u>United States <sup>b)</sup></u>	<u>Canada</u>	<u>Italy</u>	<u>Other</u>
1954-71	483.0	219.7	188.8	46.9	14.0	7.3	6.3
1954-63	165.0	124.4	7.8	24.0	3.7	0.2	4.9
1964-71	318.0	95.3	181.0	22.9	10.3	7.1	1.4
1964	16.7	12.5	2.3	1.8	0.1	-	-
1965	66.7	46.0	16.6	2.2	0.5	-	1.4
1966	56.9	29.5	19.7	3.1	1.8	2.8	-
1967	14.5	-	11.0	1.9	1.1	0.5	Negl.
1968	16.4	-	6.0	3.7	3.7	3.0	Negl.
1969	34.3	-	27.7	4.4	1.9	0.3	Negl.
1970	56.1	4.0	47.6	2.8	1.2	0.5	Negl.
1971	56.4	3.3	50.1	3.0	N.A.	-	-

a. Actual deliveries, as opposed to arms sales and aid agreements. Arms manufacturing machinery and licensing agreements are excluded from this table.

b. US data are for fiscal years and do not include commercial sales prior to 1963.

escorts, and five Wasp helicopters. At least \$50 million of the total delivered was for ships turned over to South Africa as part of the Simonstown accord, which also provided for South African takeover of the previously British-owned naval bases at Simonstown.<sup>(1)</sup>

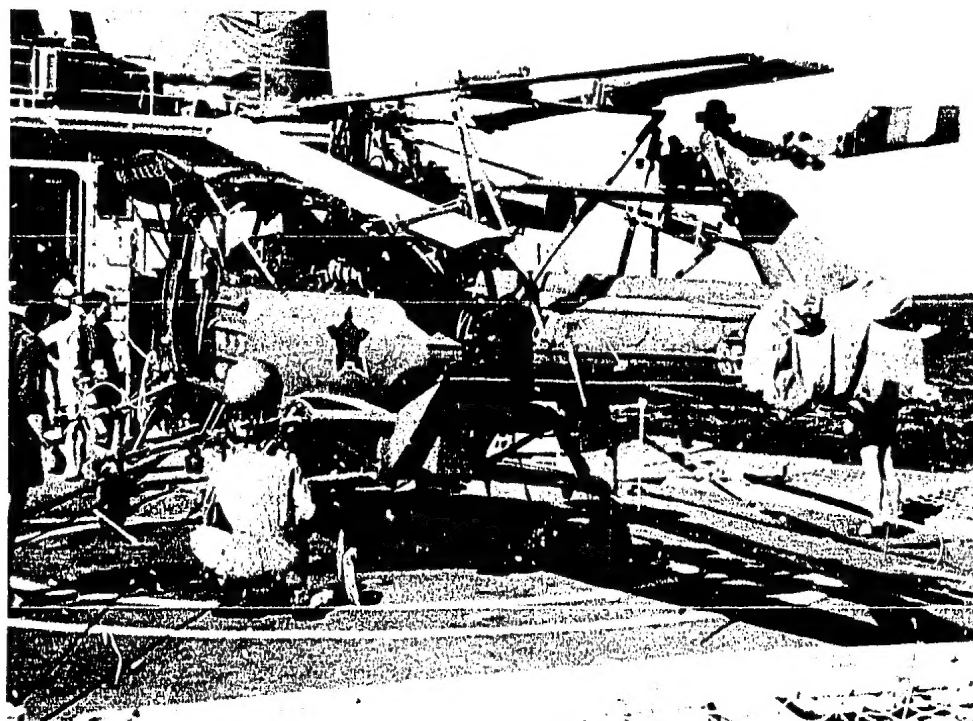
1. A large share of the arms Pretoria procured from the United Kingdom was obtained through the 1955 Simonstown agreement under which London agreed to continue providing arms to South Africa in return for access to the Simonstown naval base. The base, near Capetown, was established by the British in 1795.

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**A Hawker Siddeley Buccaneer Strike Aircraft of the South African Air Force Carrying Four NGRD AS-30 Air-to-Surface Missiles**



**A South African Navy Westland Wasp Helicopter Aboard an Antisubmarine Warfare Frigate**

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7. In late 1963, London notified Pretoria that it planned to abide by the UN embargo but would honor its outstanding commitments, which then totaled about \$90 million. These deliveries were completed in 1966. Although Pretoria considered London's action a violation of the 1955 Simonstown agreement, South Africa did not abrogate the accord. Limited naval cooperation between the two countries continued, and the agreement was renegotiated in 1967.

8. After the Conservatives came to power in 1970, the Heath government relaxed its arms ban and opened negotiations for the sale of seven Wasp helicopters sought by Pretoria. Later, London agreed to sell not only the seven helicopters, but also three Hawker Siddeley HS-125 jet transports and a patrol rescue boat<sup>(2)</sup> (see Table 2). The \$10 million of equipment was purchased from private companies and financed commercially. London claimed that the equipment was not "offensive arms" and thus did not violate the UN embargo.

#### France - A Ready Seller

9. In the decade before the UN embargo, France had sold South Africa less than \$8 million in arms. In 1965 alone, deliveries had reached \$17 million and by 1971 had jumped to \$50 million.

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Table 2

#### Recent British Arms Sales to South Africa

<u>Year of Agreement</u>	<u>Million US \$</u>	<u>Type of Equipment</u>
Total	9.9	
1969	4.0	4 HS-125 jet transport aircraft
1970	0.2	1 AGS hydrographic survey ship
1971	2.4	7 Westland Wasp maritime helicopters
1971	3.0	3 HS-125 jet transport aircraft
1971	0.3	1 YP patrol/rescue boat

2. Four HS-125 transports and a survey ship were sold in 1969 and 1970, but London claimed they were for civilian use.

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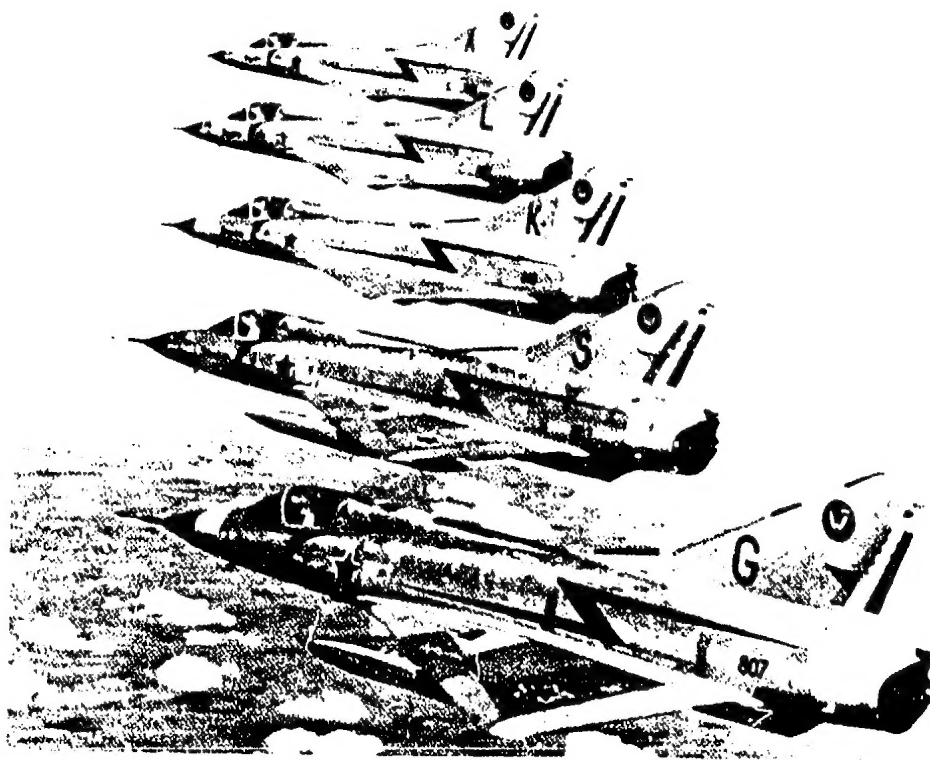
Table 3

## French Arms Sales to South Africa

<u>Year of Agreement</u>	<u>Million US \$</u>	<u>Type of Equipment</u>
<b>Total</b>	<b>210.2</b>	
1963	5.6	14 Mirage III jet fighters
1964-68	N.A.	AS-20, AS-30, Entac, and SS-11 missiles
1965	44.0	26 Mirage III jet fighter/bombers
1965	0.1	200 Brandt light mortars
1967	44.5	9 C-160 TRANSALL turboprop transport aircraft
1967	0.5	Antiaircraft fire control units
1967	9.0	96 Matra 530 antiaircraft air-to-air missiles
1967	33.6	3 Daphne-class submarines
1967	16.0	16 Super Frelon helicopters
1968	8.0	32 Alouette helicopters
1968	18.0	20 AS-330 Puma helicopters
1968	2.0	ATAR motors and parts
1968	0.9	250 Panhard motors
1969	6.0	120 torpedos
1969	20.0	2 Cactus surface-to-air missile batteries
1970	2.0	8 Alouette helicopters

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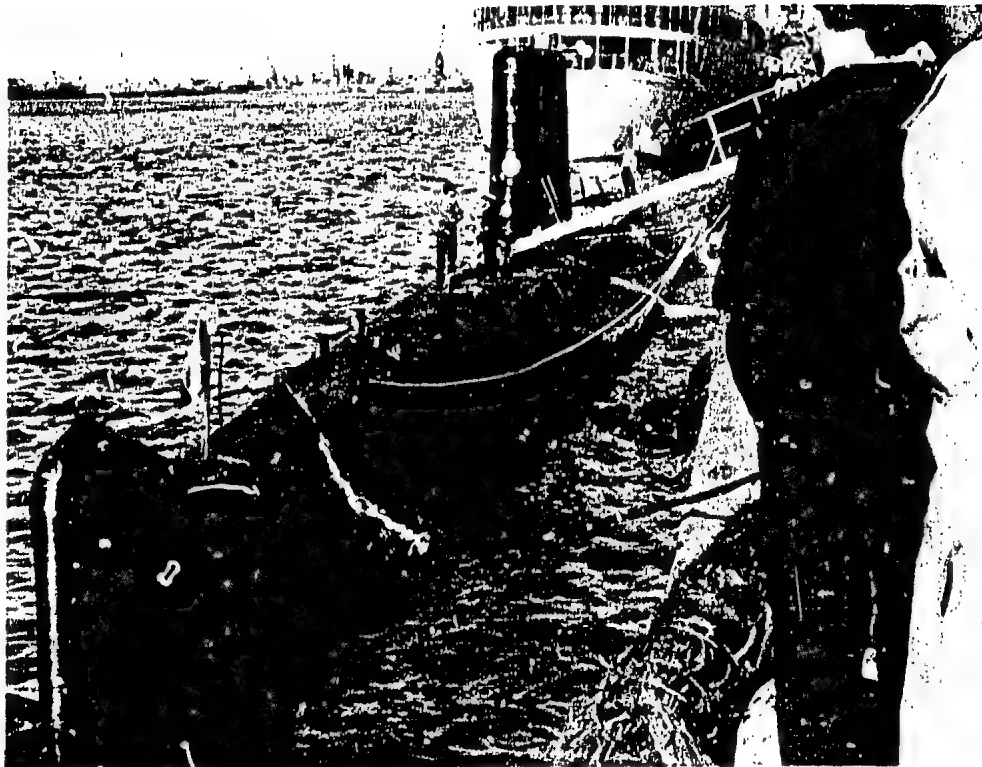
10. Aircraft, including helicopters, have accounted for about 65% of total South African purchases from France. The South African air force received some 40 Mirage III aircraft from France for about \$50 million, the first African nation to acquire supersonic aircraft. Virtually all aircraft missiles imported by South Africa have been obtained from France. These include 68-mm and 37-mm SNEB rockets, NORD AS-20 and AS-30 air-to-surface missiles, and Matra R-530 air-to-air missiles.



South African Air Force Mirage III Jet Fighters

11. Pretoria has procured about \$42 million of naval vessels and equipment from France since 1966. About \$8 million worth of Alouette helicopters were obtained in 1968 for search and rescue operations. Three Daphne-class submarines purchased in 1967 for about \$34 million were delivered in 1971-72. French-designed radar equipment is being fitted to British-built warships, and Pretoria is negotiating for as many as 12 French Brequet Atlantic twin-turboprop maritime patrol aircraft.

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**A South African Naval Daphne-Class, Diesel-Electric Powered Medium-Range Submarine**

12. More than \$70 million in ground forces equipment was procured during 1968-71. The South African army used French Panhard armored cars; TRANSALL transport aircraft; and Puma, Super Frelon, and Alouette helicopters and is armed with French-designed mortars, rifles, and NORD SS-11 and Entac wire-guided antitank missile systems. The two countries maintain a personnel exchange program, and a few senior military personnel attend the French military staff college in Paris.

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#### Other Sources of Arms

14. South Africa has purchased nearly \$100 million worth of military equipment from other countries since 1963 (see Table 4). The terms of repayment are believed to be similar to those of the French, about seven years at 4%-7% interest. Purchases have consisted largely of electronic equipment, spare parts, support equipment, motors, and some aircraft.

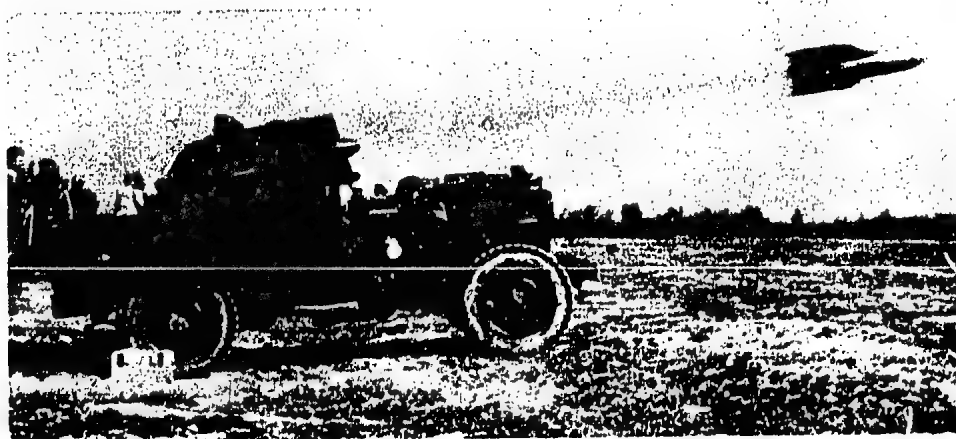
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Table 4

## Other Arms Sales to South Africa

<u>Year of Agreement</u>	<u>Country of Origin</u>	<u>Million US \$</u>	<u>Type of Equipment</u>
<b>Total</b>		<b>99.9</b>	
1964-70	Canada	10.3	Spare parts and ammunition
1964-71	United States	22.9	Primarily commercial sales of spare parts
1967	Italy	1.2	Parts for Viper motors
1967	Italy	2.1	Parts for jet transports
1968	Italy	1.4	9 Piaggio 166M tactical transport aircraft
1970	Italy	1.5	11 Piaggio 166M tactical transport aircraft
1971	Italy	0.5	40 Aerfer-Aermachi AM-3C spotter aircraft
1972	Portugal	60.0	6 guided missile corvettes (light frigates)

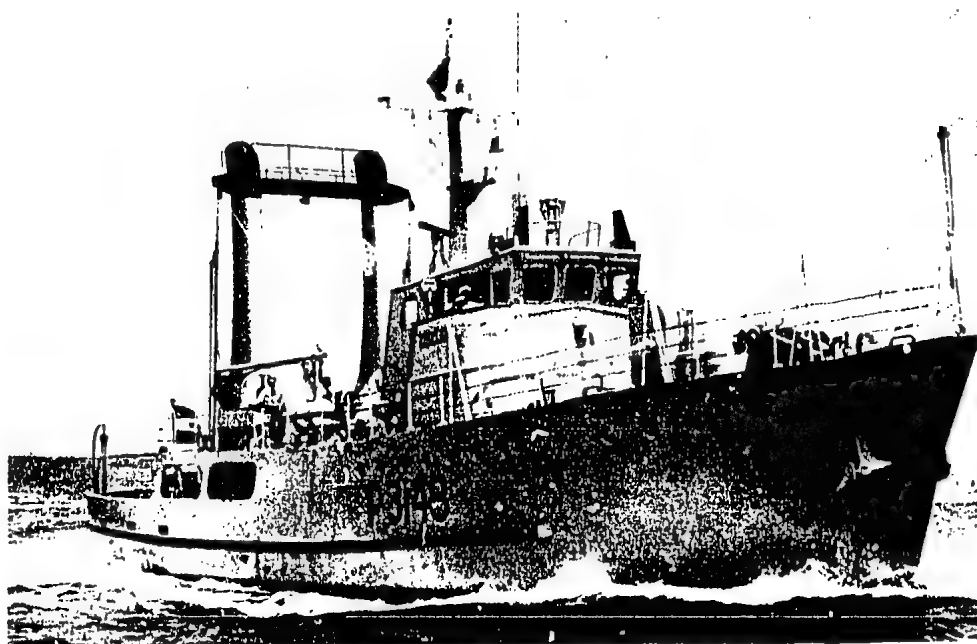


Entac Antitank Missile Leaving Its Container-Launchers on a Jeep

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15. Although the US government has honored the embargo - there have been no official US sales of weapons since 1963 - almost \$23 million worth of US equipment has been sold since 1963. Some 90% has been obtained from private arms dealers, primarily spare parts, aircraft engines, and support equipment. Prior to the embargo, seven C-130 transport and 200 AIM Sidewinder missiles were purchased.

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South African Naval Torpedo Recovery Launch



An Impala Jet Trainer Aircraft of the South African Air Force  
Manufactured in South Africa



**Panhard Armored Cars Manufactured in South Africa Under French License**

16. Canada has provided some \$10 million of arms, mostly spare parts for F-86 Sabre jets, and ammunition. Although Canada officially adheres to the embargo, it has sanctioned these private sales. Italy has sold some \$7 million, mainly 20 Piaggio 166M reconnaissance/transport aircraft and 40 AM-3C light spotter aircraft. Six guided missile corvettes have been purchased from Portugal for some \$60 million, and West Germany, Belgium, and Switzerland have provided small quantities of vehicles, small arms, and ammunition.

#### Domestic Arms Production

17. The arms embargo spurred South Africa into a rapid expansion and diversification of its arms production facilities to reduce its dependence on foreign procurement. Producing little more than small arms and quartermaster supplies in the early 1960s, South Africa's arms industry now meets most military needs. The precise magnitude of domestic arms procurement cannot be ascertained, but Pretoria indicates that domestic procurement in 1971 accounted for about 70% of total military procurement, compared with 20% in 1966.

18. The industry produces a wide range of communications and ground forces equipment - including cannon of 20-mm to 260-mm caliber - ammunition, bombs, armored cars, subsonic jet aircraft, radars, missiles, and some naval craft. Pretoria's nascent aerospace industry meets about half of the country's needs for civil and military aircraft and eventually will produce supersonic aircraft and surface-to-air missiles. The

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main center of ordnance production is the factory at Tythelton near Pretoria. The Sustral Engineering Works at Bohsburg assembles all armored vehicles, and most aircraft are produced at the Atlas aircraft plant near Johannesburg.

19. South Africa also is developing most of its defense installations and has begun building small naval craft. A \$64 million Northern Air Defense Sector early warning radar facility being built at Devon is linked by computers to radar stations along the Botswana border. A \$16 million naval communications system is under construction near Capetown. Pretoria recently produced its first medium-size operational ship, a 122-foot torpedo recovery launch. Smaller naval vessels have been built or refitted, such as harbor tugs and a 53-foot training craft. Some ship conversions also have been completed such as the conversion of a tanker to a replenishment oiler of some 18,000 tons.

20. South Africa has developed a number of weapons of indigenous design, including the world's largest tank recovery vehicle, an armored personnel carrier, an antitank mine, canister-shot mines, napalm bombs made entirely from domestic raw materials, a new lightweight transmitter/receiver communications assembly, a radio beacon for paratroops, and a night sight for rifles. An advanced system for identifying aircraft is being developed along with a ground support aircraft.

21. The development of Pretoria's defense industries has been facilitated by licensing arrangements with West European suppliers.<sup>(3)</sup> By 1966, Pretoria had acquired 127 licenses under which it was producing 140 different types of ammunition, bombs, rockets, infantry weapons, and armored vehicles. Most of the military aircraft being produced are Italian-licensed Impala IIs, a subsonic jet trainer which can be fitted with light armament for tactical use. About 175 of these have been produced, including 66 purchased as major components. Pretoria is manufacturing an improved version of the NATO 7.62-mm FN automatic rifle under Belgian license.

22. France, however, is the primary licensor and is assisting South Africa to develop sophisticated equipment. The first accord was signed in 1961 to assemble Panhard armored vehicles. A modified version - the Eland - subsequently was developed by South Africa.

23. Under some \$120 million of accords signed during 1964-69, Paris assisted Pretoria to develop the Cactus/Crotale surface-to-air missile system.

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3. Licensing may involve merely assembly rights of components or the provision of technology, the sale of plant and equipment to manufacture the components, or development of a weapons system in the licensor country.

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The Cactus Air Defense Missile, Originally Developed as the French Crotale System, an Effective, Mobile, All-Weather Surface-to-Air Missile

South Africa initiated the design specifications for the system and financed a large part of the development and initial production in France. Pretoria held an option to buy the first ten batteries produced, but may order only three because of their high costs. Each battery costs some \$10 million to \$12 million and includes three acquisition radar units, nine firing units, 72-120 missiles, loading vehicles, and related support equipment. Furthermore, South African requirements probably will be met by local assembly with components imported from France. Current French plans call for this system to be integrated with French air defense units. The United States and Switzerland are testing the Cactus/Crotale, and a number of other European countries have expressed interest in the system.

24. In 1971, Pretoria signed a \$478 million licensing agreement with Paris to manufacture the Mirage III and the newly developed Mach II Mirage F-1 supersonic aircraft. The agreement calls for the French to build a facility in South Africa. Pretoria will produce the basic components, but the aircraft engines and various sophisticated elements will continue to be imported from France for some years. The French have sent technical advisers to South Africa and are providing training for local technicians. Initial South African production of the Mirage III is not expected until 1973. The terms of repayment for this and the Cactus agreements are not known, but may involve some credits.

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### Exports

25. South African arms exports are still small, and, except for the arms supplied to other southern African countries, the only other known deliveries are three T-6 aircraft to Gabon. In 1971, Pretoria disclosed that a "substantial foreign order" for about \$1.4 million had been received and that negotiations are under way for an additional \$10 million. It is not known which countries will be supplied, but they probably are Rhodesia and the Portuguese colonies. It is likely, however, that as South African production facilities expand Pretoria will seek markets to make the industry viable.

### Impact of South African Defense Spending on the Budget

26. The UN embargo had an immediate impact on South Africa's defense budget. Defense allocations rose from an average of about \$80 million a year during 1954-63 to \$375 million in 1964 (see Table 5). They also rose in subsequent years, reaching a peak of nearly \$470 million in 1972.

27. Despite its growth, defense spending has not had any perceptible adverse effects on South Africa's economy. Defense expenditures have never exceeded 20% of the total budget and their share has declined sharply since 1966. As a percent of gross national product (GNP) they have averaged 2.7% during 1964-71, well below the peak of 3.6% in 1964.

28. Direct military procurements during 1966-72 total more than \$1.5 billion and annually have accounted for some 50%-60% of total military expenditures (see Table 6). During these years the share of foreign arms procurement declined sharply from about 80% to about 30% as South Africa's domestic facilities were expanded.

29. Military expenditures are likely to continue to increase over the next few years. An official white paper in 1969 announced planned defense outlays over the next five years of about \$2.1 billion, or an average of \$429 million a year. The total for the previous five years was about \$1.8 billion, or an average of \$358 million a year.

### Summary

30. The UN arms embargo imposed against South Africa in 1963 has not adversely affected Pretoria's arms acquisitions. Instead the embargo spurred Pretoria to accelerate its purchases abroad and rapidly expand and diversify its domestic production facilities. South Africa now is stronger

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Table 5

South African Defense Budget<sup>a</sup>

	<u>Defense Budget (Million US \$)</u>	<u>As a Share of the National Budget (Percent)</u>	<u>As a Share of GNP (Percent)</u>
Annual Average 1954-63	81	8.0	3.0
1964	375	19.0	3.6
1965	326	15.3	3.0
1966	358	20.0	3.1
1967	373	19.1	2.8
1968	356	16.3	2.6
1969	380	16.5	2.5
1970	360	13.6	2.1
1971	443	12.7	2.4
1972	469	12.2	2.5 <sup>b</sup>

a. Data are for fiscal years beginning 1 April of the year stated.

b. Estimated.

militarily than at any time in the past and less dependent on external sources of arms.

31. Since 1953, South Africa has imported nearly \$485 million of arms, of which almost two-thirds has been received since the embargo. Most of the military equipment imported since 1963 has come from France, which replaced the United Kingdom as Pretoria's primary foreign source of arms when the United Kingdom decided to adhere to the UN resolution and provide only equipment for which commitments had already been made.

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Table 6  
South African Defence Expenditures<sup>a</sup>

	Million US \$						
	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>
Total defense budget	358.1	372.9	355.7	380.1	359.9	443.1	469.4
Total military equipment procurement <sup>b</sup>	<u>220.6</u>	<u>198.4</u>	<u>179.3</u>	<u>195.1</u>	<u>215.4</u>	<u>241.6</u>	<u>253.6</u>
Armaments Board arms procurement <sup>c</sup>	44.8	46.8	48.3	122.5	154.7	157.5	178.5
Defense Force procurement	175.8	151.6	131.0	72.6	60.7	84.1	75.1
Maintenance, technical services, and the like	<u>22.7</u>	<u>46.0</u>	<u>36.8</u>	<u>28.9</u>	<u>40.2</u>	<u>40.8</u>	<u>48.5</u>
Personnel-related expenditure	<u>96.6</u>	<u>98.0</u>	<u>119.0</u>	<u>145.6</u>	<u>91.0</u>	<u>147.4</u>	<u>155.4</u>
Capital and current expenditure of the Armaments Board	<u>18.2</u>	<u>30.5</u>	<u>20.6</u>	<u>10.5</u>	<u>13.3</u>	<u>13.3</u>	<u>11.9</u>

a. Data are for fiscal years beginning 1 April of the year stated.

b. Includes domestic and foreign procurement of arms and ammunition and support, radar, communication, and navigation equipment.

c. The Armaments Board, which was established in 1964, procures primarily main forces equipment and other items that are difficult to obtain. Normal procurement such as spare parts and easily obtainable requirements are procured by the logistic organization of the Defense Force. The Board exercises control over domestic arms production and attempts to stimulate domestic manufacture whenever it is feasible so as to make the country self-sufficient in arms production.

32. Domestic production facilities have been developed rapidly, and South Africa now produces some 70% of its own requirements. Paris also has played an important role in this expansion and now is assisting Pretoria in developing a capability for producing sophisticated weaponry. Licensing agreements signed in recent years to produce French-designed weapons total some \$600 million.

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33. The growth of arms procurement has caused South Africa's defense budget to jump sharply. It rose from an average of some \$80 million during 1954-63 to \$375 million in 1964 and about \$470 million in 1972. This rapid growth has not adversely affected the South African economy, however. Defense allocations in 1972 represent less than 3% of the GNP and some 12% of the total national budget.

34. South African arms procurement will continue to increase over the next few years as Pretoria begins to meet less sales resistance from Western sources and its domestic arms industry continues to expand. Moreover, as it grows, South Africa will begin to seek export markets to keep its arms industry economically viable.